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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR		ATTORNEY DOCKET NO.
08/959,013	10/28/97	O'MALLEY	B	226/286

022249
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HM12/0124

EXAMINER	
HAYES, R	
ART UNIT	**PAPER NUMBER**
1644	

DATE MAILED: 01/24/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)
08/959,013	O'Malley et al
Examiner	**Group Art Unit**
Robert C. Hayes	1645

☒ Responsive to communication(s) filed on *Oct 29, 1999*.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *3* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *11-14, 19, 30, and 31* is/are pending in the application.

Of the above, claim(s) *19* is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *11-14, 30, and 31* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☒ Claims *11-14, 19, 30, and 31* are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). *6*

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

1. The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1644.

Election/Restriction

2. Applicant's election of Group I (claims 11-41 & 30-31) in Paper No. 10 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claim 19 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b) as being drawn to a non-elected invention. Election was made **without** traverse in Paper No. 10.

This application contains claim 19 drawn to an invention nonelected with traverse in Paper 10. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Information Disclosure Statement

3. The information disclosure statement filed 12/10/98 (paper #5) fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information

referred to therein has not been considered. In other words, a PCT search report is not equivalent to a PTO1449.

The information disclosure statement filed 12/10/98 (paper #5) also fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 13-14 & 31 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. For example, the current recitation of "A cell" encompasses a human organism. It is suggested that amending the claims to "an isolated host cell" should obviate this rejection.

Double Patenting

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg.*

Co., 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 31-31 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 61-62 of copending Application No. 08/479913. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

6. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11-14 are provisionally rejected under the judicially created doctrine of double patenting over claims 32, 37-49, 51-54, 56-57 & 64-66 of copending Application No. 08/479913. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending application and would be covered by any patent granted on that copending application since the referenced copending application and the instant application are claiming common subject matter, as follows:

Both applications claim nucleic acids encoding modified glucocorticoid receptor proteins, which recite no structural characteristics that distinguishes the claims of the instant invention from that claimed in 08/479913.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 11-14 & 30-31 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the nucleic acid encoding the modified glucocorticoid receptor protein contained within plasmid pGR0403R (i.e., from SEQ ID NO 1), does not reasonably provide enablement for claims to any biologically functionally equivalent plasmid or

DNA molecule with no recited structural characteristics. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

The specification describes a single nucleic acid molecule encoding a single glucocorticoid receptor protein (e.g., plasmid pGR0403R of SEQ ID NO 1). However, the name "a plasmid designated as pGR0403R", or a nucleic acid encoding a "modified glucocorticoid receptor protein", sets forth no structural characterization and little functional characteristics, and encompasses any random mutation to the single disclosed nucleic acid of SEQ ID NO:1. Moreover, the specification does not teach which particular nucleotides within this plasmid, or within a nucleic acid encoding this specific modified glucocorticoid receptor, are required for encoding a glucocorticoid receptor protein with any activity. Nor does the specification disclose those encoded amino acid residues critical for ligand/agonist/ antagonist binding, or those "modified" encoded amino acid residues that can give rise to a functional glucocorticoid receptor protein, which distinguishes the instant invention from any different nucleic acid encoding a modified steroid hormone receptor protein. In contrast, the skilled artisan would reasonably expect that any random modification/mutation to a nucleic acid molecule would result in an inactive encoded glucocorticoid receptor protein; thereby, being not enabled. For example, Rudinger teaches that "it is impossible to attach a unique significance to any residue in a sequence. A given amino acid will not by any means have the same significance in different peptide sequences, or even in different positions of the same sequence"(see page 3). Rudinger further

states on page 6 that "the significance of particular amino acid sequences for different aspects of biological activity cannot be predicted *a priori* but must be determined from case to case by painstaking experimental study". Therefore, the lack of guidance provided in the specification, as to what "modifications" can be tolerated to maintain a functional nucleic acid molecule that encodes a functional glucocorticoid receptor protein, would prevent the skilled artisan from determining whether any random "modified" glucocorticoid encoding nucleic acid molecule could be made that retains the desired function of the instant invention, without undue experimentation to determine otherwise.

8. Claims 11-12 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These claims are dependent on nonelected base claims.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Evans et al. US Patent 4,981,784), or by Hollenberg et al. (1987), or by Lanz et al. (1994).

Evans et al. teach plasmids that contain modified steroid hormone receptor proteins (see columns 4, 7-8, 10-12, 17-20). In particular, modified plasmids were constructed that swap functional domains for estrogen, glucocorticoid, mineralocorticoid, thyroid hormone and retinoic acid receptors (i.e., encoded "modified" glucocorticoid receptors (e.g., column 17, lines 16-39). In that CV-1 cells (i.e., a transformed mammalian cell line; as it relates to claims 12-14) were transfected with the expression plasmids encoding these chimeric receptors, all structural limitations of the claims are met.

Hollenberg et al. teach a number of modified glucocorticoid receptor comprising deletion mutants, which appear to encompass all claim limitations of nonelected claims 6-9 (pg. 41, Figs 1-2). In that these representative DNA sequences were transfected/transformed into CV-1 host cells (e.g., Fig. 2 and pg. 45), the limitations of claims 12-14 are also met.

Lanz et al. teach glucocorticoid expression constructs (i.e., vectors containing modified glucocorticoid receptor nucleic acid molecules) that encode modified glucocorticoid receptors that are responsive to the antagonist, RU486, but no longer react to the agonist, dexamethasone (e.g., pg. 2183-2185 & 2187-2188; fig. 1 and Table 1). In that these constructs are transfected into CV-1 host cells, all structural limitations of the claims are met.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 30-31 are rejected under 35 U.S.C. § 103 as being unpatentable over Hollenberg et al., or over Lanz et al.

Hollenberg et al. and Lanz et al. are as set forth above. However, neither Hollenberg nor Lanz specifically call their plasmid constructs, pGR0403, even though they do appear to disclose an equivalent constructs, e.g., pRShGRα (Fig. 2 and pg. 45 of Hollenberg), and, e.g., CS1/CD (pg. 2187 and Fig. 1c of Lanz).

It would have been obvious to one or ordinary skilled in the art at the time of filing Applicants' invention to use any vector well known in the art that can transfect the CV-1 host cells of Hollenberg or Lanz, for cloning the modified glucocorticoid receptor DNA of Hollenberg or Lanz, including the same vector as used in the construction of plasmid pGR0403R, because use

of vectors to express equivalent DNA sequences encoding modified glucocorticoid receptors with equivalent function activity are well known in the art, and merely increase the variety of cells that this construct can successfully transform (i.e., CV-1 host cells). It is further noted that the vector used for construction of plasmid pGR0403R was not disclosed in the instant application, and therefore, appears equivalent to the plasmid construct of Hollenberg or Lanz, and therefore, obvious; absent evidence to the contrary.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Robert Hayes whose telephone number is (703) 305-3132. The examiner can normally be reached on Monday through Thursday, and alternative Fridays, from 8:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Chan, can be reached on (703) 308-3973. The fax phone number for this Group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

RCH

Robert C. Hayes, Ph.D.
January 7, 2000

Christina Chan

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